Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-71 (canceled)

72. (Currently amended) An isolated polypeptide that is a fragment of human CD9 ~~and comprised at least 5 contiguous amino acids from amino acids 35-58 of human CD9 or amino acids 113-192 of human CD9~~, wherein the polypeptide is selected from the group of (i) a polypeptide that comprises the amino acid sequence of SEQ ID NO: 4, SEQ ID NO: 5, or SEQ ID NO: 6, and (ii) a polypeptide consisting of SEQ ID NO: 3.

73. (Original) The isolated polypeptide according to claim 72 wherein the polypeptide is

KDEPQRETLKAIHYALNCCGLAGGVEQFISDICPKKDV (SEQ ID NO: 4);

PKKDVLETFTVKSCPDAIKEVFDNK (SEQ ID NO: 5); or

PKKDVLETFTVKSCPDAI (SEQ ID NO: 6).

74. (Currently amended) The isolated polypeptide according to claim 72 wherein the polypeptide consists of ~~comprises~~ PKKDV (SEQ ID NO: 3).

75. (Original) A chimeric protein comprising the polypeptide according to claim 72.

76-78 (Cancelled)

79. (New) The isolated polypeptide according to claim 72 wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4.

80. (New) The isolated polypeptide according to claim 72 wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 5.

81. (New) The isolated polypeptide according to claim 72 wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 6.

82. (New) A method of interfering with CD9 binding to fibronectin comprising:

providing one or more polypeptides according to claim 72; and

contacting fibronectin with the one or more polypeptides under conditions effective to interfere with CD9 binding to fibronectin.

83. (New) The method according to claim 82 wherein the polypeptide comprises SEQ ID NO: 6.

84. (New) The method according to claim 82 wherein the polypeptide comprises SEQ ID NO: 5.

85. (New) A method of modifying adhesion, motility, or spreading of a CD9-expressing cell on fibronectin comprising

providing one or more polypeptides according to claim 72; and

contacting fibronectin with the one or more polypeptides under conditions effective to modify cellular adhesion, motility, or spreading of a CD9-expressing cell on fibronectin.

86. (New) The method according to claim 85 wherein the polypeptide comprises SEQ ID NO: 6.

87. (New) The method according to claim 85 wherein the polypeptide comprises SEQ ID NO: 5.

88. (New) The method according to claim 85 wherein the CD-9 expressing cell is a leukocyte, endothelial cell, vascular smooth muscle cell, or glial cell.

89. (New) The method according to claim 85 wherein the CD-9 expressing cell is *in vitro*.

90. (New) The method according to claim 85 wherein the CD-9 expressing cell is *in vivo*.

91. (New) A method of inhibiting proliferation or survival of CD9-expressing cells comprising:

providing one or more polypeptides according to claim 72; and

contacting an extracellular matrix comprising fibronectin, which extracellular matrix is in contact with a CD9-expressing cell, with the one or more polypeptides under conditions effective to inhibit proliferation or survival of the CD9-expressing cell.

92. (New) The method according to claim 91 wherein the polypeptide comprises SEQ ID NO: 6.

93. (New) The method according to claim 91 wherein the polypeptide comprises SEQ ID NO: 5.

94. (New) The method according to claim 91 wherein said contacting the extracellular matrix comprises administering the one or more polypeptides to a patient under conditions effective to substantially saturate available CD9 binding sites on the extracellular matrix with the one or more polypeptides.

95. (New) The method according to claim 94 wherein said administering is carried out orally, parenterally, subcutaneously, intravenously, intramuscularly, intraperitoneally, by intranasal instillation, by intracavitary or intravesical instillation, intraocularly, intraarterially, intralesionally, by application to mucous membranes, such as, that of the nose, throat, and bronchial tubes, or by transdermal delivery.

96. (New) A method of treating a patient for a condition or disease state involving proliferation or survival of CD9-expressing cells comprising:

performing the method according to claim 94, wherein inhibiting proliferation or survival of the CD9-expressing cells treats the condition or disease state.

97. (New) The method according to claim 96 wherein the condition or disease state involving proliferation or survival of CD9-expressing cells is selected from the group consisting of thrombosis, atherosclerosis, vein graft failure, restenosis, transplant arteriopathy, bleeding disorders, angiogenesis, and primary and metastatic cancers.

98. (New) The method according to claim 96 wherein the condition or disease state involving proliferation of CD9-expressing cells is restenosis and the CD9-expressing cells are vascular smooth muscle cells.

99. (New) The method according to claim 96 wherein the condition or disease state involving proliferation or survival of CD9-expressing cells is primary or metastatic cancer and the CD9-expressing cells cancer cells are selected from the group consisting of breast cancer, prostate cancer, colon cancer, melanoma, ovarian cancer, neuroblastoma, glioma, and glioblastoma.

100. (New) A method of inducing pericellular fibronectin matrix assembly comprising

providing one or more polypeptides according to claim 72; and

contacting a pericellular fibronectin matrix assembly with the one or more polypeptides, wherein said contacting induces pericellular fibronectin matrix assembly by the CD9-expressing cell.

101. (New) The method according to claim 100 wherein the polypeptide comprises SEQ ID NO: 6.

102. (New) The method according to claim 100 wherein the polypeptide comprises SEQ ID NO: 5.

103. (New) A method of promoting invasiveness of a cell through a collagen and/or laminin matrix comprising:

providing one or more polypeptides according to claim 72; and

contacting a pericellular fibronectin matrix assembly with the one or more polypeptides under conditions effective to inhibit CD9 activity, thereby promoting invasiveness of a cell through the collagen and/or laminin matrix.

104. (New) The method according to claim 103 wherein the polypeptide comprises SEQ ID NO: 6.

105. (New) The method according to claim 103 wherein the polypeptide comprises SEQ ID NO: 5.

106. A method of modifying cell-to-cell interaction comprising:

providing one or more polypeptides according to claim 72; and

contacting a cell possessing a CD9 ligand with the one or more polypeptides under conditions effective to inhibit interaction between the cell and a CD9-expressing cell.

107. (New) The method according to claim 106 wherein the polypeptide comprises SEQ ID NO: 6.

108. (New) The method according to claim 106 wherein the polypeptide comprises SEQ ID NO: 5.